

Notice of Allowability

Application No.

09/771,631

Examiner

Michael B. Holmes

Applicant(s)

HAMADOU ET AL.

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2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/24/2005.
2. ☒ The allowed claim(s) is/are 1-3, 5, 6, 8-16.
3. ☒ The drawings filed on 07 June 2001 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. 09/771,631.
 3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____



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P.O. Box 1450, Alexandria, Virginia 22313-1450 - WWW.USPTO.GOV

Examiner's Detailed Office Action

1. Claims 1-3, 5, 6, 8-16 are allowed.
2. Claims 4 & 7 have been canceled.

Examiner's Amendment

3. Amendments to the claims

1. (currently amended): An information, operating or monitoring system for a real device having real subcomponents, the system comprising: a data processing device, comprising a software model including virtual components, wherein the software model represents the real device, and wherein the virtual components are linked to each other in correspondence to relationships of or within the real device; and a display for displaying views associated with the virtual components; wherein at least one of the virtual components and the views include access data for accessing at least one of local information data and global information data, which are associated with the virtual components, wherein the virtual components comprise a virtual device and virtual subcomponents which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and

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data processing programs, wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device, and wherein technologically different ones of the virtual subcomponents are assigned to the virtual device, wherein technologically structured subordinate components are assigned to each of the virtual subcomponents, and wherein the access data are structured for navigating a user a component arranged in the data processing device, wherein the component is structured for at least one of transmitting and receiving data.

2. (original): The system of claim 1, wherein the real device comprises an automation system.
3. (original): The system of claim 1, wherein links between the virtual components form a data structure of the software model that is stored in the data processing device.
4. (canceled).
5. (currently amended): The system of claim 1, wherein the data processing programs are embedded in a software frame via cross-references, and wherein at least one of the software frame and the cross-references is structured to permit, for navigation purposes, access by a user to at least one of the virtual device and the virtual subcomponents.

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6. (original): The system of claim 1, further comprising: a connection between the data processing device and the real device, wherein, via the connection, control data and process data are transmitted in at least one of a unidirectional manner and a bi-directional manner; and a component arranged in the data processing device, wherein the component is structured for at least one of transmitting and receiving data.

7. (canceled).

8. (currently amended): A method for operating and monitoring a real device having real subcomponents, comprising: navigating in a model stored in a data processing device, wherein the model comprises virtual components and views, wherein the virtual components represent the real device; and wherein the views are assigned to the virtual components; assigning a model structure to the model, wherein the model structure is stored in the data processing device, and wherein the model structure comprises a linkage of the virtual components in correspondence to relationships of or within the real device; and accessing at least one of local information data and global information data via access data that are included in at least one of the virtual components and the views, wherein the local information data and the global information data are associated with the virtual components, wherein the virtual components comprise a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs, wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships,

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and technical relationships of or within the real device, and wherein technologically different ones of the virtual subcomponents are assigned to the virtual device, wherein technologically structured subordinate components are assigned to each of the virtual subcomponents, and wherein the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents, and through the subordinate components.

9. (original): The method of claim 8, further comprising displaying the local information data and the global information data to a user via the views.

10. (original): The method of claim 8, further comprising assigning a menu bar to a specific one of the views, wherein the menu bar identifies access capabilities to other available ones of the views, which are different from the specific one of the views.

11. (original): The method of claim 8, further comprising transmitting data via a connection between the data processing device and the real device.

12. (original): The method of claim 11, wherein the data comprise at least one of operation data and control data.

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13. (original): The method of claim 8, further comprising activating a virtual subcomponent as one of the views by selecting a section of an image of the real device, wherein the section represents the virtual subcomponent.

14. (currently amended): A user interface for operating and monitoring a device comprising: components interrelated through technical relationships, wherein the user interface comprises a plurality of screen windows on a screen of a display, wherein each screen window comprises an information set regarding one of the components of the device; wherein each screen window comprises at least one cross-reference via which a user selects a specific screen window within the plurality of screen windows; wherein the respective information sets on each screen window are linked to each other by the at least one cross-reference in correspondence to the technical relationships between the components of the device; wherein the components comprise a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and wherein technologically different ones of the virtual subcomponents are assigned to the virtual device, wherein technologically structured subordinate components are assigned to each of the virtual subcomponents, and wherein the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponent through the subordinate components.

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15. (currently amended): An information, operation or monitoring system for a real device having a plurality of subcomponents and a data processing device, comprising: a model having virtual components representing the real device and views associated with the virtual components for presenting information data of the virtual components stored locally on at least one of the data processing device and a computer linked to the data processing device; wherein the model has a model structure stored in the data processing device; wherein the model structure is formed from a linkage of the virtual components analogously to the relationships of the real device; wherein at least one of the virtual components and the views have access data for accessing the information data; wherein a connection is provided between the data processing device and the real device; wherein the data processing device has at least one of a transmission and receiving component for at least one of transmitting and receiving data; and wherein the real device is provided for at least one of unidirectional and bidirectional transmission of control and process data; wherein the virtual components comprise a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and wherein technologically different ones of the virtual subcomponents are assigned to the virtual device, wherein technologically structured subordinate components are assigned to each of the virtual subcomponents, and wherein the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents, and through the subordinate components.

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16. (currently amended): A method for information, operation or monitoring a real device, which includes a plurality of subcomponents, wherein a model having virtual components is provided as a representation of the real device and in which views are respectively assigned to the virtual components; via which information data of the virtual components that are stored locally on at least one of a data processing device and a computer linked to the data processing device is displayed to a user; wherein the user accesses the information data via at least one of the virtual components and access data assigned to the views; wherein a connection is provided between the data processing device and the real device; wherein the data processing device has at least one of a transmission and receiving component for at least one of transmitting and receiving data; and wherein the connection between the data processing device and the real device is provided for at least one of unidirectional and bidirectional transmission of control and process data; wherein the virtual components comprise a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, wherein the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; wherein the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and wherein technologically different ones of the virtual subcomponents are assigned to the virtual device, wherein technologically structured subordinate components are assigned to each of the virtual subcomponents, and wherein the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents, and through the subordinate components.

REASONS FOR ALLOWANCE

4. The following is an Examiner's statement for reasons for allowance:
5. The closest art prior *Saucedo et al.* (USPN 5,754,738) does not teach or render obvious applicant's claimed invention. In particular, as pointed out below, the art lacks certain features and the combination as specified in the respective claims.
6. With regards to claim 1 *Saucedo et al.* does not disclose the virtual components comprising a virtual device and virtual subcomponents which represent the real device and the real subcomponents, respectively, the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs, the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device, and technologically different ones of the virtual subcomponents are assigned to the virtual device, technologically structured subordinate components are assigned to each of the virtual subcomponents, and the access data are structured for navigating a user a component arranged in the data processing device, wherein the component is structured for at least one of transmitting and receiving data.
7. With regards to claim 8 *Saucedo et al.* does not disclose the virtual components comprising a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs, the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device, and technologically different ones of the virtual subcomponents are assigned to the virtual device, technologically

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structured subordinate components are assigned to each of the virtual subcomponents, and the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents, and through the subordinate components.

8. With regards to claim 14 *Saucedo et al.* does not disclose the components comprising a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and technologically different ones of the virtual subcomponents are assigned to the virtual device, technologically structured subordinate components are assigned to each of the virtual subcomponents, and the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponent through the subordinate components.

9. With regards to claim 15 *Saucedo et al.* does not disclose the virtual components comprising a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and technologically different ones of the virtual subcomponents are assigned to the virtual device, technologically structured subordinate components are assigned to each of the virtual

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subcomponents, and the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents. and through the subordinate components.

10. With regards to claim 16 *Saucedo et al.* does not disclose the virtual components comprising a virtual device and virtual subcomponents, which represent the real device and the real subcomponents, respectively, the virtual device and the virtual subcomponents are designed as at least one of data and data processing programs; the virtual device and the virtual subcomponents are linked to each other in correspondence to at least one of operational relationships, physical relationships, and technical relationships of or within the real device; and technologically different ones of the virtual subcomponents are assigned to the virtual device, technologically structured subordinate components are assigned to each of the virtual subcomponents, and the access data are structured for navigating a user through the virtual device, through the technologically different virtual subcomponents, and through the subordinate components.

Correspondence Information

11. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email Michael.holmesb@uspto.gov.

If you need to send an Official facsimile transmission, please send it to (703) 746-7239.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony

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Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

Michael B. Holmes

Patent Examiner

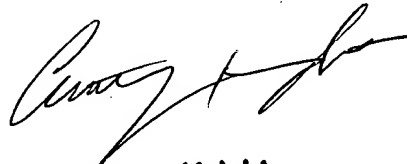
Artificial Intelligence

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United States Department of Commerce
Patent & Trademark Office

Tuesday, July 05, 2005

MBH



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